REMARKS

This communication is in response to the Office Action mailed on September 11, 2007. The office action first reports that claim 1 was objected to under 35 U.S.C. §112 as being indefinite, citing "the transliteration relationships" as lacking antecedent basis. With this amendment, Applicants have corrected this inadvertent error by deleting the word "the". In view of this amendment, withdrawal of the objection is respectfully requested.

The office action next reports that claims 1-15 were rejected under 35 U.S.C. §102(a) as being anticipated by the article of Lee et al. In particular, steps 1-3 on page 98 and the transition paragraph between the left and right columns on page 97 were cited for teaching "using statistical textual alignment" as recited in claim 1.

With this amendment, Applicants have amended claim 1 to clarify the step of using statistical textual alignment as "using statistical textual alignment without pronunciation information of either of the words to align characters of the words." Support for this language is found in the specification at page 15, lines 4-8.

The method recited by amended claim 1 provides several advantages as discussed at page 15, line 9 through page 16, line 23 of the present application, which are provided below for convenience:

> This offers several advantages. For example, it permits the system to be used between language pairs for which phonological data may not exist, or when phonological information is not available, for example, Arabic or Chinese names when encountered in Japanese, but which need to be identified in English. Furthermore, because alignment system 210 uses standard machine translation techniques, the direction of

mapping is completely and immediately reversable, allowing the relationship between the languages to be reversed with the same training data. A further advantage of the machine translation modeling over simple character correspondence of word pairs or phonological models is the ability to map characters to null characters; among other things, this permits the system to be relatively robust when confronted with noisy morphological variation between the two languages as might be encountered when data is extracted from parallel texts. For example, given a Japanese *katakana* form "マネージ" that can be directly transliterated under one conventional transliteration scheme as "ma-ne-e-ji", the alignment system 210 can learn that these characters map to the English word "managed" in certain contexts, e.g., English "managed code", despite the additional "-ed" which lacks any counterpart in the Japanese; likewise, the system is able to learn the relevant alignments between the characters in the Japanese word "インストール", directly transliterated under one conventional transliteration scheme as "i-n-su-to-o-ru" and English "installation". FIG. 4A pictorially illustrates the alignments for this latter word pair, learned under one embodiment of the system. In this example, several characters in the English word, namely those in the final character sequence "a-t-i-o-n-$", are aligned to the Japanese end-token "$", allowing this English sequence to be potentially available to a cognate word identification system such as that in 211, albeit with a lower likelihood. This robustness, inherited from statistical machine translation, permits alignment system 210 to learn contextual mappings directly from ordinary parallel text data, something that phonological systems cannot do.

Unlike the method recited by claim 1, Lee et al. specifically teach that pronunciation information is used. At page 97, left hand column, lines 19-21 Lee et al. specifically state "one feasible solution is to adopt a Chinese romanization system to represent the pronunciation of each Chinese character." (Emphasis added) This conversion is apparently necessary because at page 98, right-hand column, lines 18-30 Lee et al. specifically teach restricting alignment to limited patterns:

> To accelerate the convergence of EM training and reduce the noisy TU aligned pairs (U_i, v_j), we restrict the combination of TU pairs to limited patterns. Consonant TU pairs only with same or similar phonemes are allowed to be matched together. An English consonant is also allowed to match with a Chinese syllable beginning with same or similar phonemes. An English semi-vowel TU can either be matched with a Chinese consonant or a vowel with same or similar phonemes, or be matched with a Chinese syllable beginning with same or similar phonemes.

In view that Lee et al. specifically teach away from the invention recited by amended claim 1, Applicant submit that Lee et al. do not teach, suggest or render obvious the method of claim 1. Withdrawal of the rejection is respectfully requested.

Independent claim 8 recites a transliteration processing system. Claim 8 has been amended to include the features of dependent claim 9 and to recite that the textural component is configured to statistically align the characters of the words without pronunciation information of the words. In view of this amendment, and for the reasons discussed above with respect to claim 1, which are incorporated herein by reference, claim 8 is also believed allowable. Withdrawal of the rejection is respectfully requested.

Independent claim 15 has been canceled and new independent claim 16 has been added. Independent claim 16 includes each of the steps recited by claim 1 and as such for the reasons discussed above which are incorporated herein by reference, this claim is also allowable. Moreover though, independent claim 16 also recites that the step of using includes "aligning at least one character of one of the words of a word pair with a null character of the other word of the word pair." Support for this language is found at page 15, lines 20-23. Lee et al. does not teach or suggest this feature nor is it believed obvious in view of Lee et al. taken alone or in combination with the art of record. Accordingly, independent claim 16 is believed allowable.

Dependent claims 22 and 20 also recite this feature and are believed separately patentable when they are combined with independent claims 1 and 8, respectfully.

Dependent claims 17 and 21 recite "exclusively" which is found in the specification at page 15, lines 7-8. These claims are also believed separately patentable.

In view of the foregoing, Applicants respectfully request reconsideration of the application as amended. Favorable action upon on all claims is solicited.

The foregoing remarks are intended to assist the Office in examining the application and in the course of explanation may employ shortened or more specific or variant descriptions of some of the claim language. Such descriptions are not intended to limit the scope of the claims; the actual claim language should be considered in each case. Furthermore, the remarks are not to be considered exhaustive of the facets of the invention which are rendered patentable, being only examples of certain advantageous features and differences, which applicant's attorney chooses to mention at this time. For the foregoing reasons, applicant reserves the right to submit additional evidence showing the distinction between applicant's invention to be unobvious in view of the prior art.

Furthermore, in commenting on the references and in order to facilitate a better understanding of the differences that are expressed in the claims, certain details of distinction between the same and the present invention have been mentioned, even though such differences do not appear in all of the claims. It is not intended by mentioning any such unclaimed distinctions to create any implied limitations in the claims.

An extension of time is hereby requested for responding to the Office Action. An online charge authorization for the extension of time fee is included herewith.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: _____
Steven M. Koehler, Reg. No. 36,188
900 Second Avenue South, Suite 1400
Minneapolis, Minnesota 55402
Phone: (612) 334-3222 Fax: (612) 334-3312